Caring for Alberta's Rural Landscape

Tips and References for Owners of Small Farms and Acreages

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ACKNOWLEDGEMENTS

This booklet was produced with cooperation from the Municipal Districts of Rocky View, Pincher Creek and Foothills, Alberta Agriculture, Food and Rural Development, Agriculture and Agri-Food Canada, "Cows and Fish Program" and the Alberta Environmentally Sustainable Agriculture Program.

The partners of this publication gratefully acknowledge the Montana Department of Natural Resources and Conservation and its publication: *Tips on Land and Water Management for Small Farms & Ranches in Montana.*

THE RURAL ALBERTA EXPERIENCE

Life in rural Alberta is full of experiences connecting you to the land . . . raising animals, growing crops . . . seeing wildlife, the sense of freedom and privacy, the fresh air, peace and quiet . . . the close-knit community with neighbours-helping-neighbours.

From the farmer or rancher running a large operation to the owner of a small acreage, these are the experiences all rural folks regard as some of the best qualities of life in the country. However, life in rural Alberta also brings new realities and responsibilities.

For example, many things that seem "automatic" in urban areas, need special consideration by residents in rural areas, including:

- a shift in thinking from being the owner of a home on a city lot, to being the caretaker of a piece of land in a larger, more natural landscape;

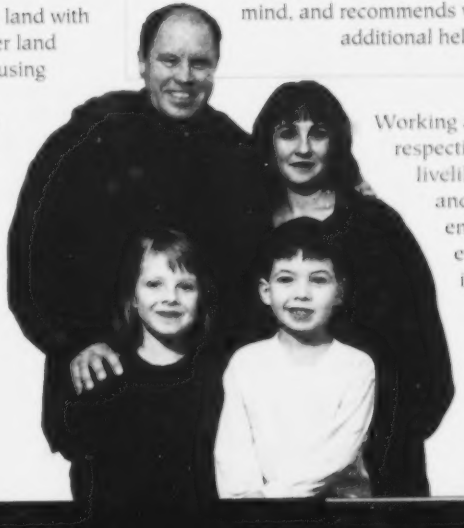
- finding and managing your own water supply;
- ensuring proper location and maintenance of a sewage system;
- the scale of many property chores is much larger and more costly than in the city (i.e. snow removal, yard care and weed control);
- garbage disposal.

It's also important to note bylaws and land uses in rural areas can be different than urban areas. Rural Alberta is primarily agricultural land with a wide variety of other land users. An acreage housing project could be located next to other small acreages with livestock, or a grain farm, market garden or greenhouse.

YOUR HOME PLACE. YOUR LANDSCAPE. YOUR LEGACY. . .

The way you use and care for your land may have impacts on the health of the entire landscape, the water quality and supply, wildlife habitat, or your neighbour's property. All of us depend on a healthy and diverse landscape with clean water and fresh air.

This booklet is designed to help you "focus-the-eye" on some of the major factors to consider as an owner of a small farm or acreage. It provides practical tips for managing your land and water resources with long-term conservation in mind, and recommends where you can get additional help or information.

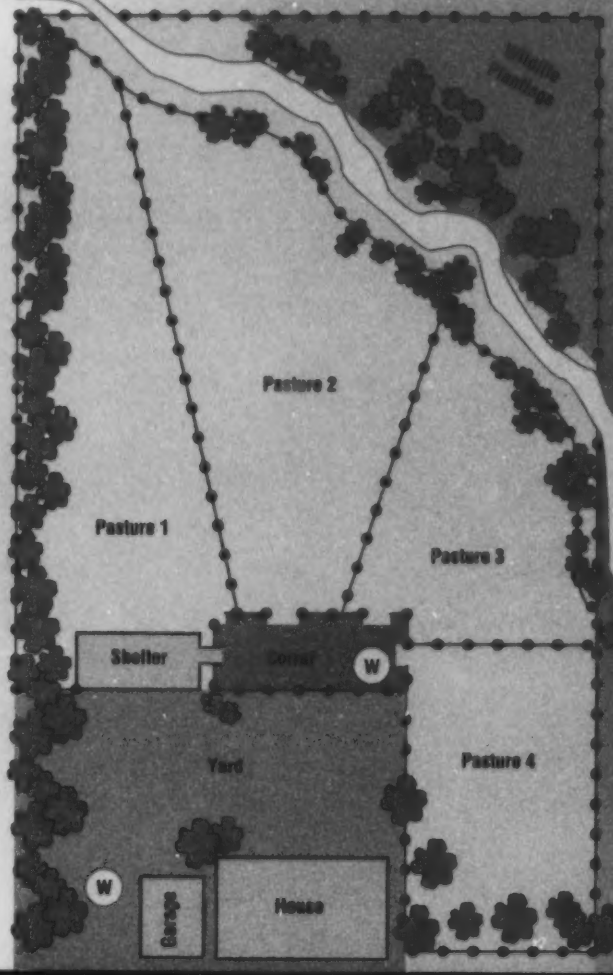


Working as a community, respecting the needs and livelihoods of others, and caring for the environment are in everyone's best interests.

MAKING PLANS AND SETTING GOALS

It's a good idea for every landowner to develop a plan that integrates personal goals and objectives and takes into account the natural resources on the land.

This booklet provides useful information on developing many different parts of your plan.



Your plan will act as a road map to work toward your goals. Some of the benefits of developing a plan include:

- Saving money because your land is more productive over the long term and it prevents costly mistakes;
- Ensuring better water quality for you, your livestock and your neighbours;
- Protecting wildlife habitat;
- Producing more grass for grazing;
- Raising healthier livestock;
- Improving your property value;
- Making your acreage more attractive;
- Fulfilling your responsibility to care for the land.

Tips for developing your plan:

- ✓ Do a scale drawing of your property;
- ✓ Determine whether your goals are achievable on your land;
- ✓ Avoid disturbing wildlife travel corridors or other large areas of intact habitat;
- ✓ Identify water courses and riparian areas;
- ✓ Maintain or plant native vegetation;
- ✓ Check with your local municipal office for development regulations.

For Help

Information about planning, upcoming workshops and other references can be obtained from your local municipality's Agricultural Fieldman/conservation staff, or private landscape planning professionals.

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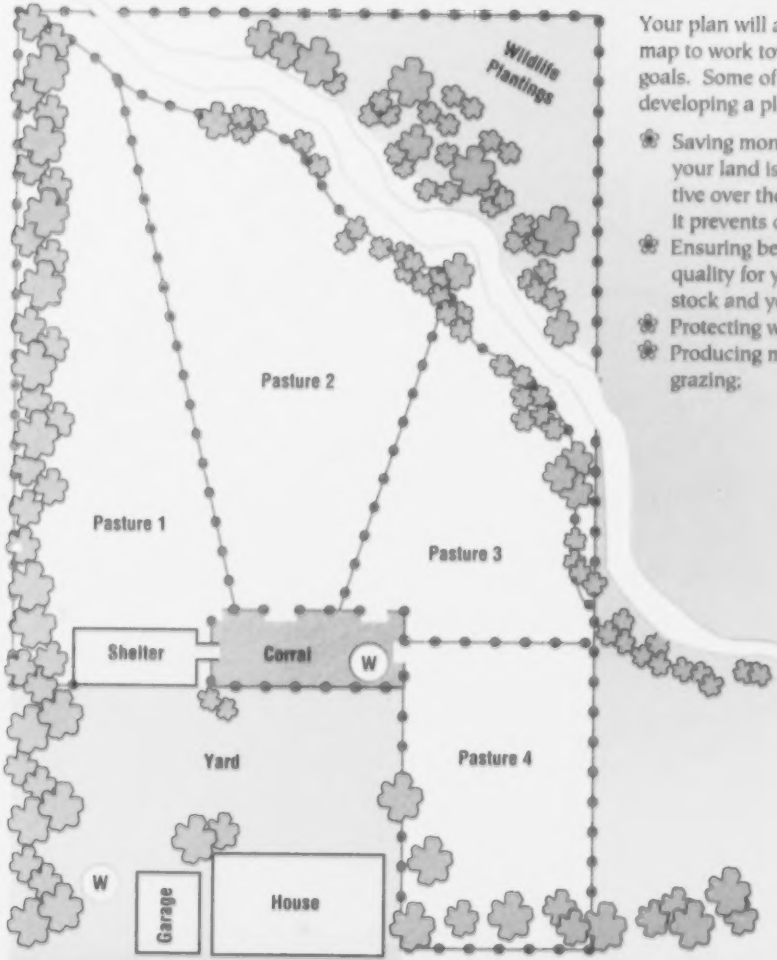

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THE GOOD EARTH – *Knowing Your Soil*

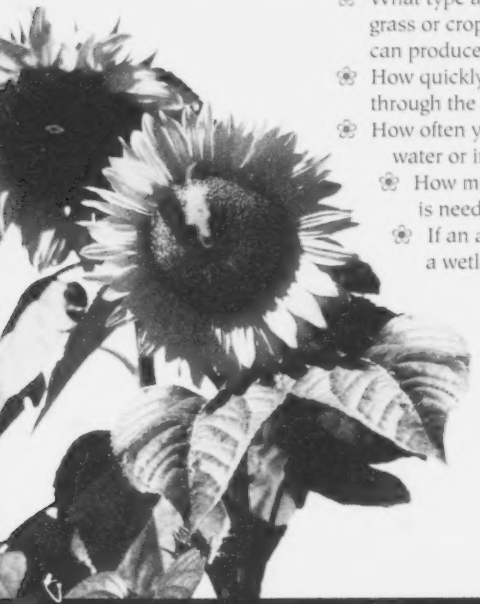
Whether you're planning to grow fruits and vegetables, raise livestock, or simply maintain the natural landscape features on your property, soil is the foundation of productive plants and animals.

In as much as soil types differ between Alberta's natural regions, soils on your land can vary widely from field to field, pasture to woodland, highland to lowland, even across your backyard.

Knowing your soil type, structure and overall health will help guide your land-use choices and give you clues to potential problems from weed infestations to where you should locate a septic system, corral or building.

Generally the type of soils you have will influence:

- What type and how much grass or crops your land can produce;
- How quickly water travels through the soil;
- How often you need to water or irrigate;
- How much fertilizer is needed;
- If an area is a wetland.



Soil Care Tip

The best soil is covered soil. Healthy vegetation protects the soil from erosion by rain, runoff and wind.

Numerous patches of bare ground, signs of water erosion and widespread weed problems are warnings that your soil needs help and protection.

For Help

Contact your local municipality's Agricultural Fieldman or Alberta Agriculture's Ag-Info Center. Phone 1-866-882-7677 for information on how to take a soil sample and where to send it for analysis.

WEEDS – *Beautiful Invaders*

Often pleasing to the eye, noxious weeds such as Scentless Chamomile, Toadflax, Common Tansy, Wild Caraway, and Purple Loosestrife can invade native wildlife habitat and agricultural lands, choking out desirable vegetation.

Scentless Chamomile

PHOTO: AAFRD, KIM STRUDER

Many of Alberta's worst weeds are "escaped" ornamental garden plants whose origins can be traced back to Europe and Asia. Unfortunately, they flourish here in North America without the natural insects, animals, fungi, and diseases that keep them under control in their homeland.

Weeds can hitch-a-ride onto your property, travelling via equipment, vehicles, hay, birds and other wildlife – even on your clothing. If soil is disturbed or cultivated, woodlands and shrubs removed, or grasses overgrazed and in poor health, conditions are perfect for weeds to thrive and take over. Left unchecked and unmanaged, the problem will only get worse.

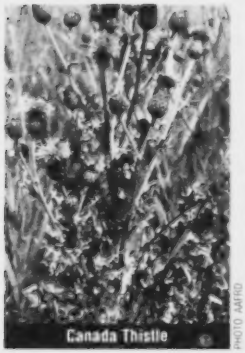

Canada Thistle

PHOTO: AAFRD

Toadflax

PHOTO: AAFRD

Leafy Spurge

PHOTO: AAFRD

For example, Knapweed has spread so rapidly in Montana and southern British Columbia, it has caused severe productivity declines on literally millions of acres of rangeland.

Armed with some basic management practices and control techniques, these beautiful invaders can be controlled or even eradicated.

Though you may have resolved that you really don't mind your property awash in a purple-blossomed sea of Canada Thistle, your neighbour probably won't like all the seeds drifting into his field crops or pasture. No weed stays within the fencelines.

As a landowner, it is your responsibility under provincial legislation to control or destroy specific weeds. Team up with neighbours and help each other control weeds in your area.

Purple Loosestrife

PHOTO: AAFRD, SYLVIE DUSEK

Scentless Chamomile. Left unchecked, weeds thrive.

Weed Control Tips

- ✓ Prevention is the most effective and easiest control option. Keep weeds from getting established on your land;
- ✓ Contact your local municipality's Agricultural Fieldman for a complete list of restricted and noxious weeds in Alberta and how to control them;
- ✓ Maintain healthy grass and shrub cover. Do not overgraze;
- ✓ Minimize soil disturbance – practice conservation tillage;
- ✓ Take a thoughtful, well-planned, management approach. Observe and evaluate how your control or removal technique worked;
- ✓ Monitor your land regularly for new weed outbreaks, as weeds spread by wind, water, animal and human movement. Regular spot spraying, mowing or hand pulling will save you money and time in the long run;
- ✓ Add to your weed control "toolbox". Learn various techniques for weed control, their advantages and disadvantages, and when best used. For example: herbicides (and how they work), mowing, hand pulling, biological control, prescribed burning, livestock grazing, competitive planting and fertilizing;
- ✓ Read herbicide mixing and application instructions carefully and keep all chemical use well away from water sources;
- ✓ *Before* purchasing grass or forage seed mixes, it's *always* good practice to request to see a Certificate of Seed Analysis (CSA), which details every seed contained in the bag. Even if your dealer says the seed is certified, he/she is required by federal law to provide the CSA on request. Contact your local municipality's Agricultural Fieldman if you are unsure about weed seeds listed on the CSA;
- ✓ If moving equipment, RV's or other vehicles from weedy to weed-free areas, make sure to wash them first to minimize seed spread;
- ✓ Avoid moving livestock directly from weedy to weed-free areas.

Spotted Knapweed
PHOTO AAFRD

Nodding Thistle
PHOTO AAFRD, BETH HOAR

Blueweed
PHOTO AAFRD

Ox-Eye Daisy
PHOTO AAFRD, DAN COLE

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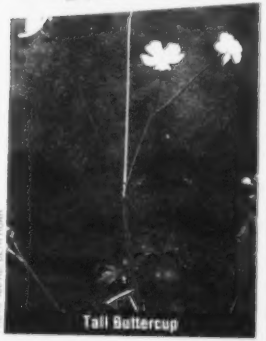

Tall Buttercup
PHOTO AAFRD, BETH HOAR

For Help

The books, *Weeds of the West* and *Weeds of the Prairies* are useful to have on-hand.

Two publications for sale from Alberta Agriculture, *Crop Protection with Herbicides*, Agdex 606-1, *Backyard Pest Management*, Agdex 605-2, give a variety of weed control tips. To order call AAFRD 1-800-292-5697.

Your local municipality's Agricultural Fieldman can also advise you on controlling other problem weeds in your area, and can provide you with other control options.

Talk to neighbours about cooperative weed control strategies.

MANAGING WASTE

The convenience of living in a "throw away society" must be carefully balanced when your home is in a rural setting.

In urban areas, garbage bags are placed on the curb each week and they seem to disappear. In rural areas, it's not that easy. There usually isn't a regular garbage disposal service, although there may be private collection services-for-hire.

Composting yard waste and animal manure on a small farm or acreage is the norm.

Regardless of where you live, everyone should make a personal effort to reduce, reuse, recycle and recover garbage and other waste products.

For Help

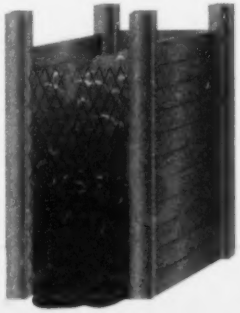
From old computers to used paper, call Alberta's toll-free, Recycle Info Line, 1-800-463-6326 for information on recycling centres and programs nearest you.

Contact your local municipality for information on garbage disposal services and regulations.

Your Agricultural Fieldman can help with waste management strategies, and may be able to provide ideas and information references for composting and waste reduction.

General Tips for Managing Waste:

- ✓ Reduce and reuse as much as possible: buy durable products, buy products with less packaging, reuse shopping bags, buy in bulk.
- ✓ Recycle. Inquire about recycling depots or programs in your area – from bottles to used motor oil.



- ✓ One person's trash is another person's treasure: from old wood and machinery to furniture, sell or giveaway things you no longer need.
- ✓ Most communities have toxic round-ups for hazardous, household products (e.g. batteries, chemicals, pesticide containers and paints).
- ✓ Check with your local municipality for garbage disposal regulations and services.
- ✓ Build nutrient-rich soil conditioner for free! Learn how to compost household and yard waste, as well as livestock manure.

When we think of water on the landscape, most of us picture a nearby lake or river. We often forget about the water cycle and how water collects in natural water courses, wetlands, streams and rivers. Water is all around us and constantly on the move . . .

. . . falling as rain or snow, then being taken up and released by trees, crops, other plants, and animals . . . travelling down through the soil into the water table . . . stored as groundwater, evaporating, melting away during spring runoff. In all of these ways, the water found on your property is linked to the landscape beyond.

How you manage your land – from croplands, pastures and woodlots, to corrals, manure spreading, septic systems, irrigation and water wells – becomes very important to maintaining water quality for you, your neighbours and your community.

The most vital areas on the landscape for water are riparian areas: the zone of water-loving vegetation alongside rivers, streams, wetlands, lakes, and sloughs.

Healthy Riparian Areas –
Tips for helping to ensure water quality and quantity

✓ Lush vegetation is the surest sign of healthy, well-managed riparian areas. Layers of shrubs and trees of all ages, plus a dense growth of deep-rooted grasses, bulrushes, and sedges make up the riparian zone. This vegetation plays a critical and complex role in filtering and slowing runoff.

Healthy riparian areas can filter up to 50% of phosphorus, 90% of sediment and 80% of nitrate runoff before it gets to the water.

✓ For riparian areas to function best at filtering runoff and providing wildlife habitat, it is generally recommended to maintain (or plant) a zone of native grass/shrub/tree cover at least 30 feet (10 metres) wide around wetland basins, alongside creeks and other water courses. Just about everything you like about these areas depends on maintaining them in a natural state;

✓ Avoid grazing riparian areas during fragile or vulnerable periods, e.g., when shores or banks are saturated with moisture and vulnerable to trampling such as early spring or other high water periods;

✓ Distribute livestock evenly and provide effective rest after grazing. Give plants time to recover when growing conditions are favorable to rebuild roots, energy supply and vigor. (See page 12, *Livestock Grazing and Forages.*)

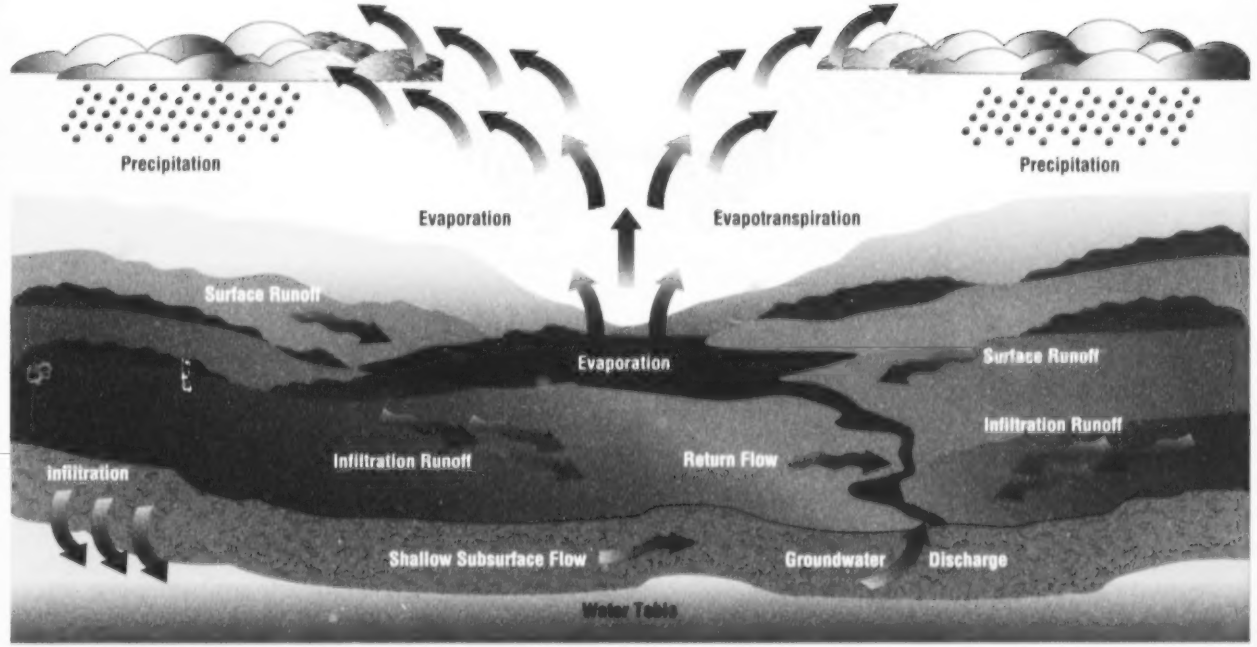
✓ Locate corrals and septic systems downslope or as far away from your water well, streams and wetlands as possible. Maintain or plant trees, shrubs and grasses around corrals to help trap and absorb waste-laden runoff before it reaches surface or groundwater;

✓ Spread manure and bedding waste when fields are dry. Work into the soil within two days after application and leave a buffer zone between any water source and manure-spreading area;

more tips on the next page

The Agriculture Operation Practices Act

As of January 1, 2002, amendments to the *Agricultural Operation Practices Act* (AOPA) brought major changes to livestock management in the province. There are two parts to this new legislation. The first deals with nuisance complaints. The second deals with proper management of manure. Although the focus is on confined feeding operations, all livestock operations that have the potential to impact the environment are governed by the rules. The Act is administered and enforced by the Natural Resources Conservation Board (NRCB)



- ✓ Protect natural watercourses. Along shorelines leave native vegetation and natural landscape undisturbed;
- ✓ Seed and maintain grasses along natural water flow paths or runoff courses in cropped fields. This will help absorb any runoff pollutants and slow down water and soil erosion;
- ✓ Follow Alberta Environment guidelines for applying agri-chemical products at the recommended distance away from waterbodies;
- ✓ From fields to market gardens, use minimum tillage farming practices to keep the soil covered with crop stubble and plant residue (mulch). This reduces soil erosion by wind and water by as much as 90%, allowing the soil to hold more moisture and rain to slowly travel through the earth.
- ✓ Keep wetlands in their natural state. They collect excess water during floods, release water during droughts, and filter water into ground water systems.

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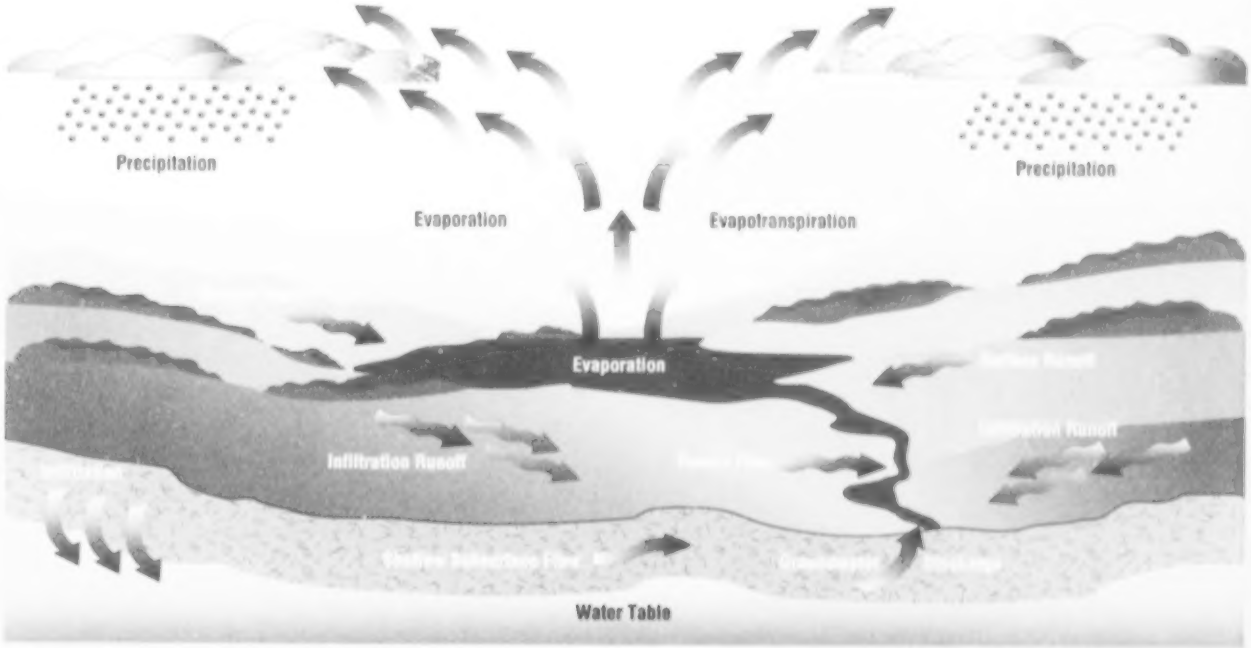

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LIVESTOCK WATERING – MANAGING ACCESS TO THEIR WATER SOURCE

Clean, fresh water is vital for animal health and a good rate of weight gain. The best way to ensure water quality is by managing livestock access to their watering source.

Bring water to the animals with an offsite watering system, e.g.) pumping or hauling water to tanks and troughs.

This works to reduce the chance of animal waste getting into the water and protects nature's "water treatment plants" the zone of grasses, shrubs and other vegetation along the waterbody from being heavily grazed or trampled.

Did You Know?

- Under ***careful*** grazing management, riparian areas generally produce about three to four times the forage production in kilograms per hectare than upland pastures. The key to this remarkable productivity is controlling access to allow vegetation in these sensitive areas to periodically "rest" from grazing pressure.

- Large livestock can exert about 10 times the weight or pressure per unit area as a full-sized bulldozer. Streambanks can't withstand this pressure for prolonged periods.

For Help

Contact your local health unit for testing drinking water.

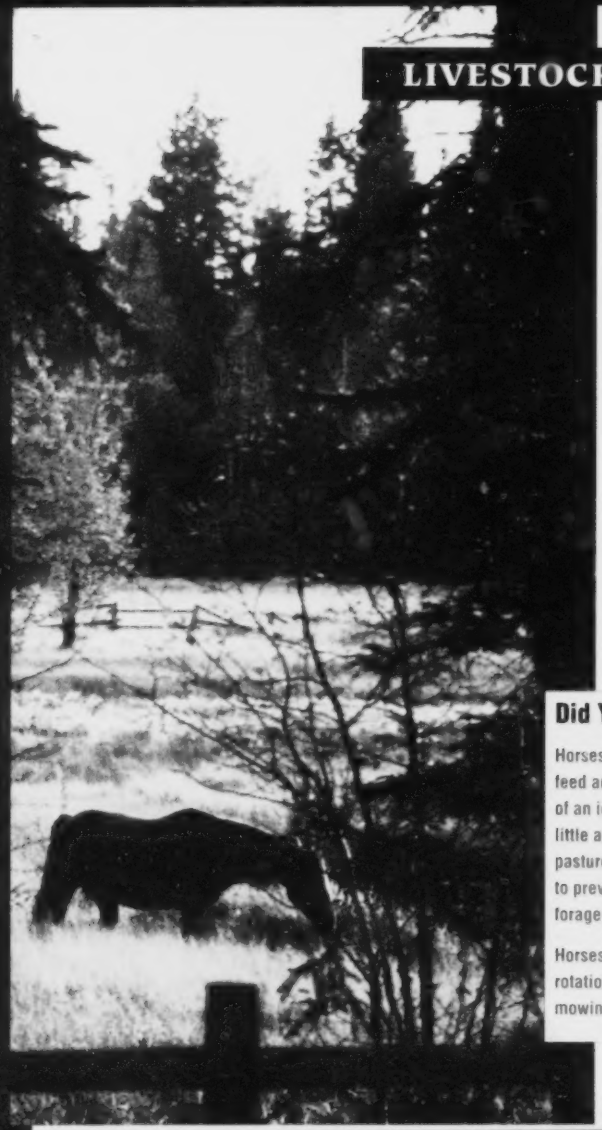
Published resource materials and assistance are available from Alberta Agriculture, Alberta Environment, Agriculture Canada-PFRA, local municipal planning and development departments, water well drillers, and various conservation organizations.

Does Your Water Measure Up?

- If you have your own water source, have you tested your drinking water recently?
- Do you have a septic system, drainfield, fuel tank or livestock corral less than 30 metres (100 ft.) from your water well, stream or other wetland?
- Are your riparian areas healthy or are they bare of vegetation, eroding or collapsing into the water?

Contact your local municipality's Agricultural Fieldman or conservation staff for information and references on protecting water quality.

LIVESTOCK GRAZING AND FORAGES



You may have seen pastures where the grass resembles a golf green. It may look clean, but the grasses have been damaged by continuous overgrazing.

The plants are stressed and the roots have stopped growing, resulting in lost forage productivity. Weeds have begun to invade.

A fairly common oversight on small farms and acreages is underestimating the forage needs of livestock which results in over use of grazing land.

Did You Know?

Horses do not need 24-hour access to feed and forage. The daily nutritional needs of an idle, mature horse can be met with as little as three to four hours of grazing on good pasture. Corral animals for the rest of the day to prevent overgrazing and help extend the forage available in your pastures.

Horses are "spot" grazers, so pasture rotations with other livestock or regular mowing may help improve grass production.

To maintain healthy livestock and forage production, you will need to develop a sustainable forage and feed plan. This involves calculating the forage your animals consume in Animal Unit Months (AUMs), the forage and hay production on your land, and the feed (hay) requirements per animal. (See *For Help* section for assistance.)

These calculations will reveal if you can meet your animals' needs on your land.

To avoid overgrazing your pastures each year, you may need to:

- Buy additional feed or rent pasture;
- Re-think your pasture-rotation grazing system;
- Reduce the number of animals;
- Check with your municipality to find out if there are regulations governing the number of animals you can have on your property;
- Adjust pasture management according to weather conditions (eg: drought).

Good Grazing Management = Livestock Health

If your animals are . . .

- ❀ Chewing on trees, shrubs, fences or barns;
- ❀ Losing weight or overweight;
- ❀ Consuming dirt while trying to graze.

Your grazing management system needs adjusting.

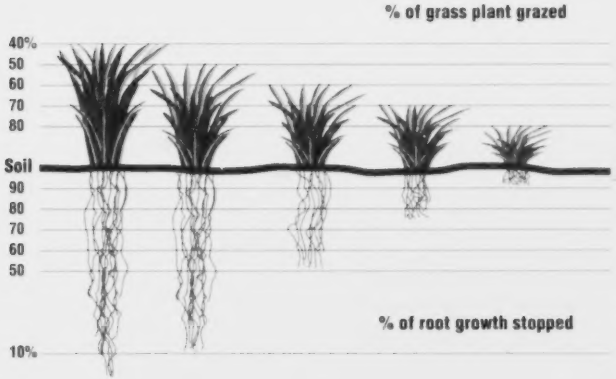
Poor condition pastures may lead to increased parasite problems, reduced body condition and overall poor health of your livestock.

Tips for Successful Grazing Management

- ✓ Depending on the size of acreage, develop a pasture-rotation grazing system. Eliminate continuous, season-long grazing;
- ✓ On a limited acreage, you may have only enough pasture to exercise your livestock and will need to supply feed year-round;
- ✓ Pasture rotation and good grazing management produces more grass, fewer weeds and healthier landscapes including wildlife habitat;
- ✓ Corral livestock and feed them hay until your pasture grasses are at least 16-20 cm high. Move animals to another pasture when 50% of the grass plant has been eaten (8-10 cm average height remains). Do not re-graze until grasses are at least 16 cm high again;
- ✓ Think of yourself as a "manager of grass" instead of livestock. Closely observe the plants in your pasture and learn how different grazing strategies can influence plant health and a favourable species diversity;

- ✓ Allow long rest periods or use a high-intensity, short-duration grazing system to help restore pastures in poor condition;
- ✓ Well-managed livestock watering and grazing plans are irreversibly linked together. Place salt blocks, livestock watering tanks, shelters and other attractants to distribute livestock evenly;
- ✓ Choose a fence-type to best meet your grazing plan needs. e.g.) woven wire, barbed-wire, rail or electric. It's your responsibility under provincial legislation to keep all your animals (***including pets***) contained on your property. Fencing also controls direct access by livestock to surface water and other sensitive natural areas on your land.

Grazing and Root Growth



Left: Overgrazing occurs when more than 50% of the plant is removed all at once, stopping root growth and reducing grass production. The impact is even more severe as more of the plant is grazed.

For Help

Grazing management courses and workshops are offered each year throughout the province by various organizations. Various resource publications, including the *Guide to Range Management and Condition*, *Guide to Stocking Rates in Alberta*, and *Manure and Pasture Management for Horse Owners*, are available from Alberta Agriculture. To order call 1-800-292-5697. Call your local municipality's Agricultural Fieldman or conservation staff for more information and assistance.

WOODLANDS AND SHELTERBELTS

Many owners of small farms and acreages in Alberta are privileged to have woodlands on their property. More than just trees, woodlands include shrubs and other plants growing on the forest floor that form the forest "understory". . .

. . . as well as clumps of willow, dogwood and wild rose growing in lowlands of fields, pastures and along fence-rows.

All are important woody features on the landscape performing essential ecosystem functions that range from absorbing carbon dioxide and releasing oxygen and moisture, to confining the spread of salinity.

They also provide vital places for wildlife to seek shelter from predators, winds and snowfall, build nests and forage for food.

There's no question woodlands add tremendous value to the health of the natural landscape, not to mention many hours of personal enjoyment. They can also be excellent, long-term sources of lumber, firewood, native berries and plants for home use and revenue generation.

PHOTO: AGRICULTURE CANADA PFRA/GARY BARR

Shelterbelts

- Reduce wind velocity for distances up to 30 times the height of the trees.
- Shelterbelt benefits have been well-documented and include: trapping snow, increasing moisture which increases yields to help offset the land removed from production for the shelterbelt.
- In areas with little woody vegetation, multi-row shelterbelts also provide critical forage, nesting and travel corridors for wildlife.
- A wide variety of trees and shrubs are available to rural landowners for farmsteads, field shelterbelts, multi-use and wildlife plantings. Contact Agriculture and Agri-food Canada or your local municipality's Agricultural Fieldman for further information.

Tips for Woodland Care

- ✓ If you are planning on earning revenue from your woodlands, read about and develop an understanding of the forest ecosystem in all its ecological diversity and changes. Forests and other woodlands are never static. Like every ecosystem in Nature, they are always changing.
- ✓ There's strength in diversity. Maintain a variety of native species and ages of trees and shrubs;
- ✓ Reduce losses of trees to insects and disease outbreaks by removing infected trees and branches as soon as possible;
- ✓ Avoid continuous, season-long livestock access to small woodlots. Heavy grazing and trampling will compact the soil, kill trees, shrubs and seedlings in the understory;
- ✓ Selective logging may help improve growth, health and vigor;
- ✓ Leave snags (standing deadwood) and larger downed logs. They are essential habitat for wildlife and forest nutrient cycling;

- ✓ Generally, woodlands will be more attractive to wildlife if left a little ragged around the edges. Instead of a clean, straight line or block of wooded area, allow some natural regrowth to create a more rough-edged buffer of shrubs and grasses giving way to pasture, cropland or yard.

For Help

Shelterbelt publications are available from: Alberta Agriculture's publication office, Agriculture Canada, or your local municipality's Agricultural Fieldman.

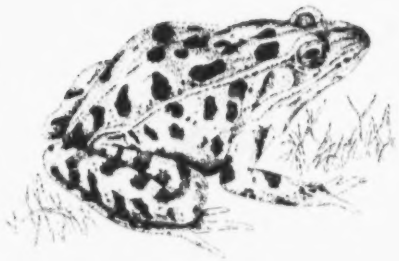
If you are planning to harvest wood or other forest products, many resources are available, ranging from: workshops, videos and manuals on woodlot management and agro-forestry, to books and factsheets on making willow furniture and growing edible berries.

There are also reference materials to help you identify potential forest disease problems or infestations.

Contact Alberta Agriculture, Woodlot Association of Alberta or your local municipality's Agricultural Fieldman for further assistance.

WILDLIFE VALUES

For many landowners, the presence of wildlife on their property is one of the most enriching and rewarding experiences of life in rural Alberta. Seeing a cow moose and her calf in the backyard early in the morning, glimpsing a flash of colour from the first bluebird of spring perched on a fencewire, listening to the raucous chorus of coyotes on a crisp fall night.



But wildlife habitat is being lost and increasingly fragmented as more land is subdivided, bringing with it people, houses, livestock, dogs, cats and other intrusions. This places increasing importance on the role you and your neighbours play in maintaining natural areas and managing your land with nature in mind. Whenever possible, encourage a diversity of vegetation and apply land-use practices – like those outlined in this booklet – that protect and conserve natural systems.

Did You Know?

Wetland Values

- Wetlands and other riparian areas are among the most productive and diverse natural systems in the world. In Alberta, over 120 species of birds, about 30 species of mammals, amphibians and reptiles, and numerous rare plants, depend on these areas for all or part of their life cycles.
- Alberta wetlands support about about one third of our species-at-risk. They provide important wildlife habitat for feeding, nesting, and cover from predators.

PHOTO: AGRICULTURE CANADA-PFRA/GARY BARK

But when there is a cost . . .
tips on managing problem wildlife

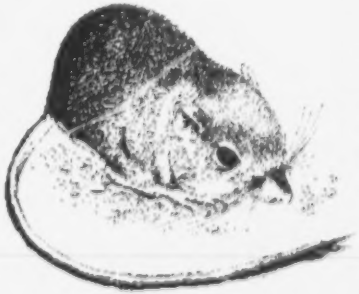
Though co-existence and respect for wildlife is a rule, what do you do, when one or two innocent looking pocket gopher mounds quickly become 300 in your newly established hayfield or back-yard?

Problem wildlife are often the habitat and food "generalists": wildlife that adapt well, even thrive in human-altered landscapes. Some of the most common problem wildlife include: pocket gophers, skunks, coyotes, foxes, ground squirrels, mice and possibly raccoons;

As with weed control, a thoughtful, **well-planned preventative approach is the best option.**

Richardson's Ground Squirrel

- ✓ Try to eliminate anything you're doing to encourage problems with wildlife. Leaving pet food out at night provides an easy supper for animals such as coyotes, foxes, skunks and magpies. A broad expanse of manicured lawn or low-grazed pasture is an invitation to ground squirrels;
- ✓ Protect gardens and crops with scarecrows or fences. Loosely wrap valued trees with fencewire to discourage beavers and deer;
- ✓ Encourage habitat for predators and allow hawks, coyotes and owls to do what comes naturally (but guard your poultry and small pets);
- ✓ Persistent, hard-to-get animals (e.g. pocket gophers) may have to be trapped;
- ✓ Poisons are generally *not* recommended and are used only as a last resort, because of potentially lethal dangers to other wildlife, pets and humans. Seek assistance from your local municipality's Agricultural Fieldman if you think you are at this stage.



For Help

Many wildlife agencies and local environmental/conservation groups offer programs and advice for maintaining wildlife habitat and encouraging the presence of wildlife.

For problem wildlife and pest control, your local municipality's Agricultural Fieldman or Alberta Sustainable Resource Development – Wildlife Officer may be able to offer suggestions or help find a solution to your particular problem.

A HEALTHY RURAL LANDSCAPE – *Now and for the Future*

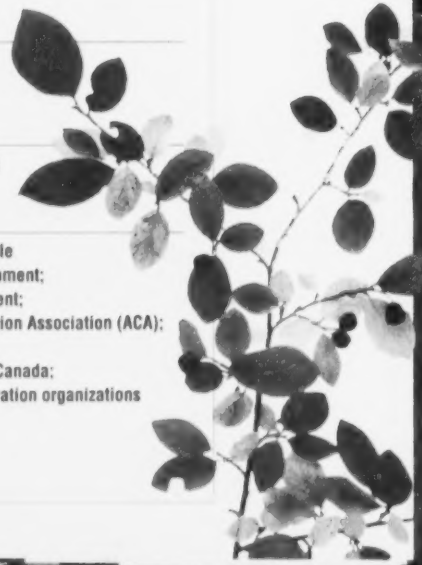
Owning a small farm or acreage in Alberta can be an extremely rewarding experience. Applying the practical tips found in this booklet will help you become a better steward of your land. Choosing to live in a rural area brings many unique responsibilities.

All the agencies involved in producing this publication encourage you to be involved with local issues and community-life. You are a member of the rural community and you have a voice in concerns affecting your land, rural development, and the health of the entire landscape. Help foster that close-knit community by preserving and caring for the rural landscape together.

WHAT YOU NEED TO KNOW AS A LANDOWNER IN RURAL ALBERTA

WHAT YOU NEED TO KNOW	WHO TO CONTACT
Water protection, rights and diversion – Legislation governs the protection of water; you must have a permit to use or divert water from rivers, streams, creeks and lakes.	Alberta Environment (AE) (Water Resources) Department of Fisheries and Oceans (DFO)
Water well licensing – For livestock and other agricultural and commercial uses.	Alberta Environment
Drinking water safety.	Regional Health Authority
Protection of streambed and shore – A permit is required before doing any activity that alters a streambank, channel or other waterbody.	Alberta Environment (Water Resources); DFO
Floodplain protection – Certain activities or development may be prohibited in the designated flood-plains of waterways and lakes.	Local municipal planning and development office
Municipal zoning – Before building or developing, determine that your zoning allows for planned use. Permits may be required.	Local municipal planning and development office
Septic systems – Provincial guidelines regulate location and standards for septic systems.	Local municipal planning and development office; Septic system installer
Waste management – Garbage collection and recycling.	Local municipal office; Recycle Information Line
Rural fire prevention – Outdoor burning restrictions usually apply for fire safety and air quality concerns. Firefighting services vary in each area.	Local municipal office
Manure Management – Provincial guidelines regulate manure management for livestock operations	Natural Resources Conservation Board; Local municipality's Agricultural Fieldman; Alberta Agriculture-Ag-Info Centre

WHAT YOU NEED TO KNOW	WHO TO CONTACT
Control of noxious and restricted weeds – Provincial legislation and municipal bylaws require control of specific weed species.	Local municipality's Agricultural Fieldman
Stocking fish in your pond – Permits are required to stock your private pond or develop a commercial fishery.	Alberta Environment Alberta Agriculture-Ag-Info Centre
Forest practices – Provincial legislation and a code of practice governs timber harvest methods and amounts on public lands. Guidelines are available for private landowners.	Alberta Sustainable Resource Development; Woodlot Association of Alberta; Local municipality's Agricultural Fieldman
Protecting your land from erosion/ degradation – Provincial legislation and municipal bylaws require prevention of erosion and degradation on your land.	Local municipality's Agricultural Fieldman; Alberta Agriculture-Ag-Info Centre
Problem wildlife – (bear, moose, elk, deer, wolf, cougar, etc.). When these wildlife are present, learning to co-exist is essential.	Alberta Sustainable Resource Development
Other problem wildlife – (coyote, pocket gopher, ground squirrels, mice, etc.)	Local Agricultural Fieldman
Protecting, maintaining and enhancing fish and wildlife habitat; conservation easements	Alberta Sustainable Resource Development; Alberta Environment; Alberta Conservation Association (ACA); DFO; Ducks Unlimited Canada; and other conservation organizations



SOURCE LIST

Many of the agencies identified in this publication have local or regional offices. Check your telephone directory and government blue pages for the following:

Local Municipalities:

- Agriculture Fieldmen
- Conservation Staff
- Planning and Development
- Protective Fire Services (fire)

Government of Alberta:

- Alberta Agriculture, Food and Rural Development
- Alberta Environment
- Alberta Sustainable Resource Development
  Toll Free Rite Line: 310-0000
  www.gov.ab.ca
- Natural Resources Conservation Board
  www.nrcb.gov.ab.ca

Government of Canada

- Agriculture and Agri-Food Canada
  www.agr.gc.ca
- Department of Fisheries and Oceans
  www.dfo-mpo.gc.ca

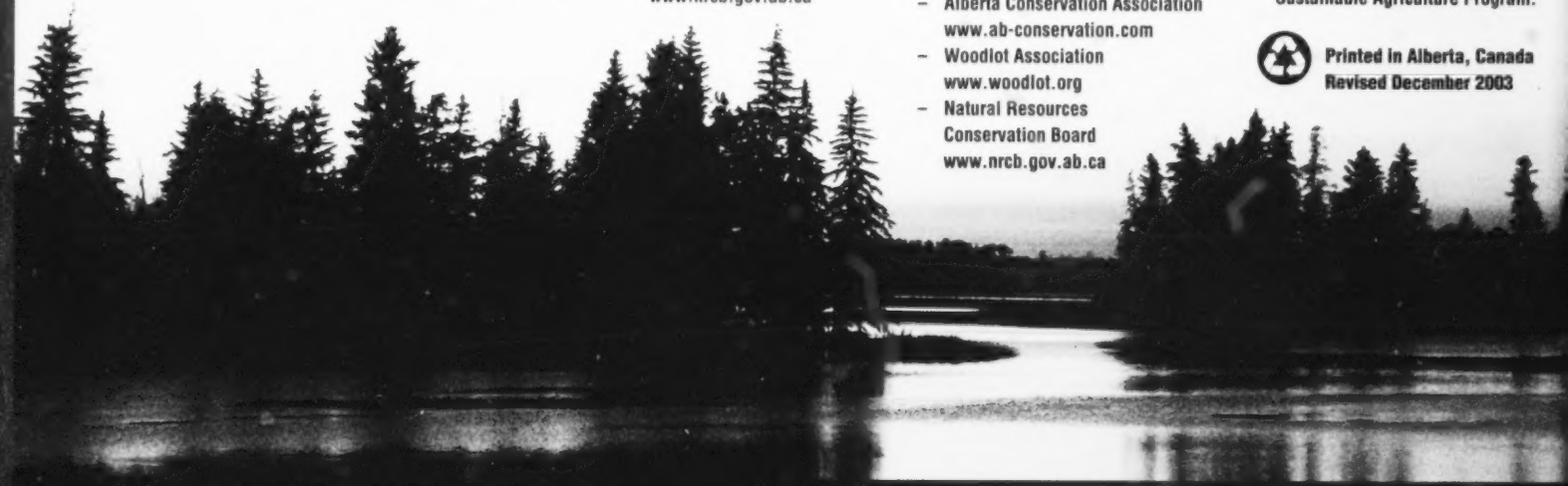
Non-Government Conservation Organizations

- Ducks Unlimited Canada
  www.ducks.ca
- Alberta Conservation Association
  www.ab-conservation.com
- Woodlot Association
  www.woodlot.org
- Natural Resources Conservation Board
  www.nrcb.gov.ab.ca

This publication was produced by:

- Municipal Districts of Rocky View, Pincher Creek and Foothills
- Alberta Agriculture, Food and Rural Development,
- Agriculture and Agri-Food Canada-Prairie Farm Rehabilitation Administration
- "Cows and Fish Program"
- Alberta Environmentally Sustainable Agriculture Program.

Printed in Alberta, Canada
Revised December 2003



This publication was sponsored by:
Alberta Agriculture, Food and Rural Development, Alberta Environmentally Sustainable Agriculture Program, Ducks Unlimited Canada, North American Waterfowl Management Plan, Counties and Municipal Districts of: Bighorn, Clearwater, Grande Prairie, Foothills, Lacombe, Parkland, Pincher Creek, Rocky View, Strathcona.

Credits: Co-ordination of text and production; Ken Gurr/Land Stewardship Centre of Canada; Photos: Except where noted, courtesy of John Luckhurst, Alberta Agriculture and M.D. Rocky View; Design; John Luckhurst/GDL.

Agdex 570-8

Distributed by: